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ADMINISTRATION OF U.S. AIR FORCE INTERNATIONAL GRANTS AND PROPOSERS GUIDE FOR BASIC RESEARCH

July 1989

Sponsored by the

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH

AIR FORCE SYSTEMS COMMAND, USAF

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PREFACE

The Air Force Office of Scientific Research (AFOSR) is responsible for the United States Air Force's Defense Research Sciences (Basic Research) program. AFOSR exercises this responsibility by awarding grants and contracts for basic research projects. An AFOSR subordinate organization, the European Office of Aerospace Research and Development (EOARD), is located in London to assist and act as point of contact for researchers in Europe, Africa and the Near and Middle East (including India).

The U.S. Air Force welcomes proposals world-wide. Proposals to be supported are selected on the basis of scientific potential for improving U.S. Air Force operational capability, significance to science, qualifications of the principal investigator and the reasonableness of the proposed budget. Potential researchers are strongly encouraged to informally determine, in advance, U.S. Air Force interest in their project.

Air Force research objectives and areas of interest are fully described in the publication RESEARCH INTERESTS OF THE AIR FORCE OFFICE OF SCIENTIFIC RESEARCH. This publication may be requested from AFOSR or EOARD. Programs satisfying research objectives involve such scientific disciplines as physics, mathematics, chemistry, electronics, materials, mechanics, energy conversion, terrestrial sciences, atmospheric sciences, astronomy and astrophysics, biological and medical sciences, and human resources.

This brochure is divided into two parts: Part A provides guidance for the preparation of proposals and general information on the AFOSR grant and contract programs; Part B is directed specifically to the administration of grants and is incorporated by reference into each grant document.

PART A
PROPOSER'S GUIDE

The U.S. Air Force will consider requests from organizations for support of its research objectives and areas of interest as described in the RESEARCH INTERESTS OF THE AIR FORCE OFFICE OF SCIENTIFIC RESEARCH. Grants are awarded to educational institutions and non-profit organizations whose primary purpose is the conduct of scientific research when it is desired to accomplish a public purpose of support or stimulation in the area of basic research. Contracts may also be awarded for research to these institutions; however, they are also made to commercial organizations. Any award of a grant is based on a formal proposal which must be submitted by an organization on behalf of the principal investigator(s).

This guide provides information to educational institutions and non-profit organizations desiring to submit a research proposal.

Although some topics in this guide may not apply to all projects, furnishing complete information on the pertinent subjects will enable processing of the proposal rapidly and without additional inquiry.

Proposers will be notified as soon as a decision is reached on whether the project will be supported.

Preliminary Consultations

Research proposals may be submitted at any time; however, potential researchers are encouraged to informally determine, in advance, the U.S. Air Force's interest in their proposed project. Preliminary communications and letters of inquiry should be directed to one of the two addresses shown below to determine interest in a proposed project. A formal proposal must eventually be submitted by the potential researcher's organization on his behalf before an evaluation can be conducted.

Submission of Proposals

Responsibility for receiving proposals and disseminating them to the appropriate potential research sponsor in the United States rests with the following points of contact:

Research proposals from Europe, Africa and the Near and Middle East (including India):

European Office of Aerospace Research and Development
223/231 Old Marylebone Road
London NW1 5th, United Kingdom

Research proposals from Australia, New Zealand, Central and South America, Canada and the Far East:

Air Force Office of Scientific Research/XO
Building 410
Bolling AFB, DC 20332 USA

Although formal research proposals may be submitted at any time, generally they should be submitted at least nine months in advance of the proposed start date to provide sufficient time for technical review, negotiation and grant/contract award.

What to Submit

While no specific form is required, proposals should cover the points outlined below, insofar as they are applicable. Proposals should be submitted in six copies (eight if submitted to EOARD).

Proposal Contents

The proposal should contain the following, generally in the format indicated:

A. Administrative Contents

1. Project Title: See B.1. below for guidance on the selection of a title.

2. Legal Name of Organization and Address.

3. Type of Organization: Profit or nonprofit.

4. Principal Investigator: Name and academic department of the scientist who will direct the research program. A short biographical resume should be included giving date and place of birth, educational background and professional experience.

5. Contracting Representative: Name, position, office address and business telephone number of the person authorized to negotiate and sign the instrument on behalf of the organization submitting the proposal.

6. Preferred Starting Date: State the date, or a range of dates, on which the proposed research program would begin, if supported. If a specific starting date is considered critical for some reason, a short explanation of the importance of such date should be given. Proposed start date should take into account that usually nine months are required for technical review, negotiation and award.

7. Estimated Duration: Estimate how many months will be required to accomplish the proposed research.

8. Other Potential Sponsors: State whether (and if so, to whom) the proposal has been submitted to other possible sponsors, including other U.S. federal agencies, and state proposed total cost to other sponsors. The submission of a proposal to other organizations concurrently with its submission to the U.S. Air Force will not prejudice its review, but notification of other sponsorship is requested as soon as this becomes known.

9. Institutional Endorsement: The principal investigator and the official authorized to sign for the institution should sign at least one copy of the proposal. All copies should indicate who signed the proposal and on what date, giving the official title in each case.

10. Continuation of Support: Requests for continued support will be considered in competition with all other proposals submitted. Consequently, requests for continued support should contain full information as outlined in

this brochure, and, in addition, a resume of research progress to date. Requests for continued support should be submitted at least six months before the expiration of the current instrument to ensure that there is no interruption in the continued support.

B. Scientific-Technical Content

The principal investigator should ensure that the technical content of the proposal is presented in a clear, unambiguous manner. This is particularly important since the principal investigator is usually unable to discuss personally the proposed research with the various scientific personnel who may review the proposal. The technical content should be presented in such a way that a co-worker who is familiar with the field but not necessarily working on the specific aspects of the proposed research is able to understand it completely. The objectives of the research should be clearly stated.

The following outline gives general guidelines for presenting the desired material:

1. Title: The title of the proposed research should be brief and should describe the content as explicitly as possible. Avoid use of such words as "research", "study" and "investigation" since they are implied. Since the title will be mechanically processed, attempt to restrict the length to less than 130 typewritten spaces and avoid the use of superscripts and subscripts.

2. Abstract: An abstract of the proposed research, approximately 200 words or less, should be included. The general objectives and a general discussion of the research program should be outlined in the abstract.

3. Historical Background: Review the scientific and technical background of related, previously reported work. Indicate the point of departure for the proposed research. Include a bibliography of pertinent literature.

4. Approach: The approach is one of the most important parts of the proposal. The investigator should describe the uniqueness of the approach to the research problem and should address any previous work related to the approach. Include, as references if possible, any mathematical developments or experimental data which amplifies the approach or feasibility considerations.

While the abstract summarizes the general aspects of the research, the approach should give a detailed description of the research to be undertaken, the theoretical considerations and experimental techniques to be used, and their relation to comparable work in progress elsewhere, together with a bibliography and a list of pertinent literature citations.

Any unique features of the proposed research program such as the use of extremely high precision equipment, special handling facilities, special qualifications of the research personnel or the dependence of measurements upon geographical location should also be included.

5. Personnel: Provide a short biographical resume of other senior professional personnel who will be directly associated with the research project. The names and titles of other scientific and technical personnel to be associated with the project in an advisory or consulting capacity should also be listed. Also indicate the number of student research assistants and their academic levels.

6. Facilities/Equipment: Identify available facilities/equipment. Identify additional items of facilities or equipment which the institution proposes to acquire at its own expense, which are especially adapted or suited to the proposed research.

7. Use of U.S. Government Facilities/Equipment: If U.S. Government-owned facilities/equipment in the investigator's possession are to be used, the proposal should indicate this, making reference to the specific facilities/equipment items and the number of the contract or grant under which they are presently accountable. Additional facilities/equipment will not be provided unless the research cannot be completed by any other practical means. Further, facilities/equipment will not be provided unless the official authorized to sign for the institution states in writing that the institution is unwilling or financially unable to acquire the necessary facilities/equipment with institution funds and the facilities/equipment are not within the current inventory of the institution.

C. Evaluation Factors

The following factors will be considered in the award process:

1. Favorable technical evaluation.

2. Overall scientific, technical, or socioeconomic merits. Only proposals evaluated as offering significant advancement in the state of the art will be considered for funding.

3. Potential contributions of the effort to the AFOSR specific mission.

4. The offeror's capabilities, related experience, facilities, techniques, or unique combinations of these factors integral to achieving the objectives of the proposal.

5. The qualifications, capabilities, and experience of the proposed principal investigator, team leader, or key personnel who are critical to achieving the objectives of the proposal.

6. The realism and reasonableness of the proposal cost and availability of funds.

D. Cost Estimate (See Sample Cost Estimate in back of this brochure - Exhibit A)

The proposal should include an estimate of total annual costs and total project costs, preferable for a period covering 3 years; the estimate should be expressed in U.S. dollars using the current exchange rate. This estimate must show separately the expenses to be supported by the U.S. Government and any expenses to be supported by the proposer or other sources. The sample cost estimate in the back of this brochure should be used as a guide for preparing this budget. Regardless of the cost estimate format used, the degree of detail shown must be the same as that shown on the sample cost estimate. The costs contributed from non-U.S. Government sources, together with the amount of the grant request, constitute the total research project cost. For proposed projects of more than one year duration, separate estimates are required for each year.

Set forth below are the items most frequently appearing in the budgetary portion of the proposals, together with some brief comments on certain of the relevant policies on their treatment:

1. Salaries: This item should include all personnel, listed by name and/or position to the extent known. For each person or position listed, provide the following:

a. Current or projected salary base and amount (i.e., $20,000 annual, $20,000/9-month academic, $25,000/10-month academic). Indicate whether amount includes projected increases and at what rate.

b. Portion of time to be devoted to the proposed research, separated between academic and non-academic (summer) terms where applicable.

c. Annual charges to the research project, divided between proposed grant charges and cost-sharing amounts where applicable.

Research during the academic term is deemed to be a part of regular academic duties, not an extra function for which additional compensation or compensation at a higher rate is warranted. Consequently, established academic term salaries shall not be augmented either in rate or total amount for research performed during the academic term. Rates of compensation for research conducted during non-academic (summer) terms shall not exceed established institutional rates.

When a part, or all, of an individual's services are to be charged as project costs, it is expected that the individual will be relieved of a comparable portion of regular teaching or other obligations.

2. Employee Benefits: Indicate rate and basis of amount proposed.

3. Special Test Equipment: Itemize and describe as completely as possible the equipment to be acquired, including manufacturer, model number and its cost. Costs should be based on recent quotations from manufacturers or distributors.

4. Other Equipment: Describe separately (a) equipment to be fabricated for specific research purposes, and the cost; (b) standard equipment to be acquired and modified for specific requirements, providing acquisition and modification costs separately; and (c) existing equipment to be modified to meet specific research requirements, providing modification costs. In all cases, indicate the useful life of the equipment.

Title to Equipment: Title to equipment purchased with grant funds will vest in the grantee at time of acquisition. At the contracting officer's discretion, however, the grant may provide for retention of title by the U.S. Government or may impose conditions governing the use of the equipment.

5. Expendable Equipment and Supplies: Identify as specifically as possible the expendable equipment and supplies required. If such a relationship is possible, substantiate the estimate from experience gained over a previous grant or similar project. Include vendor quotations or catalog pricing schedules where appropriate.

6. Travel: Indicate briefly the purpose, destination, number of days per trip and relationship to the research. Transportation costs plus a nominal rate for living expenses are normally permitted. U.S. Flag Carriers shall be used to the maximum extent possible. Air travel should be forecast at coach, less than first class or similar rates, as applicable. Include cost of air fare and per diem rate to be used and related expenses such as ground transportation (taxi, bus or train fare or automobile rental) or conference registration fees.

7. Publication and Report Costs: Estimate the costs of publishing and reporting research results, including clerical preparation, page or illustration charges, reprints and distribution.

8. Other Direct Costs: Itemize other anticipated direct costs not included above such as consultants and computer costs, stating anticipated time and rate of compensation. Also include here, if anticipated, subcontracted services, contracts for services and rental or lease of equipment and their costs.

9. Indirect Costs: Costs that cannot readily be separated and described, such as heating, electricity, building space, administrative support, etc. are indirect costs. As a general rule, grants will not include any amount for the payment of indirect cost. If indirect costs are included in the cost estimate, they will be the subject of separate negotiations. Indirect costs are normally expressed as a percentage of salaries or total direct costs.

10. Cost Sharing: Grantees are encouraged to share from non-U.S. Government funds in the cost of research projects. The proposed cost share amount should be included as a part of the cost estimate. The extent of cost sharing will be negotiated and will be shown on the grant document in terms of dollars.

E. Other Information to be Provided

1. Expenditures in the United States: Intended expenditures of grant funds in the United States should be identified by cost category. A summary cost total of all amounts to be expended in the United States should be stated on the proposed budget. Examples of these expenditures are United States manufactured equipment and material purchases, travel on American carrier and living expenses for travel within the United States.

2. Tax Relief: List taxes, if any, from which the research is exempt by virtue of tax relief agreements between the institution country and the United States. Include a forecast of the specific amount of the tax relief, to the extent practicable.

Proprietary Information

Proposals often contain information the proposer considers to be proprietary. This information may concern or relate to trade secrets, processes, operations, style of work or apparatus or may deal with the identity, confidential statistical data, amount or source of income, profits, losses or expenditures of the proposing institution.

The policy of the Air Force is to treat such information to the extent possible, as prohibited from unauthorized disclosure when the Air Force has been properly put on notice of the proprietary nature of such information. If data is submitted without appropriate restrictive markings, it may jeopardize the submitter's ability to prevent disclosure outside the Government. If you wish to restrict certain information from open disclosure, follow the procedures outlined in Part B, Protecting Proprietary Information, of this brochure.

Document and Information Services

The Defense Technical Information Center (DTIC) is the central facility within the Department of Defense for processing and supplying reports of Defense-sponsored research, development, test and evaluation efforts. Technical reports and related documentation services are available to grantees and contractors. To assist organizations in acquiring DTIC services, DTIC provides a manual entitled "Registration for DOD Scientific and Technical Information Services," available from DTIC-DDR-1, Cameron Station, Alexandria VA 22314 USA (Telephone: 202-274-6871).

DOD reports are made available for sale through the National Technical Information Service (NTIS). Reports available to the public are announced through Government Reports Announcements (GRA), the announcement medium of NTIS. GRA is distributed twice monthly with its index volumes, Government Reports Index (GRI). Inquiries on NTIS services may be directed to NTIS, Springfield VA 22161 USA (Telephone: 703-487-4600). DTIC and NTIS services, some available at no cost, include copies of technical reports, report bibliographies, subject searches, resumes of active R&D efforts, and other products. In the EOARD area, assistance in obtaining pertinent publications may be requested from the London Office. (Telephone: London 409-4376/4505).

PART B
GRANT ADMINISTRATIVE PROVISIONS

This Part contains the administrative provisions of agreement between the Air Force Office of Scientific Research and the grantee. These provisions are incorporated by reference into the grant. The purpose of Part B is to define the general obligations of the parties involved, and to assist in the effective and efficient conduct of the research.

Responsibilities

While the ultimate responsibility for the administration of any grant instrument rests with AFOSR, it is primarily the responsibility of the research institution and the principal investigator to determine the means by which the research can be conducted most effectively. AFOSR will promote and encourage the development of research management policies and actions that will enhance the joint responsibility of the institution and the principal investigator toward making sound scientific and administrative judgements. Performing institutions are encouraged to seek the advice and opinion of the AFOSR contracting officer or program manager, but the institution should not infer that advice by AFOSR shifts the responsibility for making management or performance decisions from the institution to AFOSR. The abiding concern of AFOSR is that grants are always used to achieve a maximum contribution to the new knowledge essential to the continued superiority of the Air Force operational capability through support and stimulation of basic scientific research. It is expected that institutions and principal investigators will direct their efforts toward this end.

Grant Payments

Payments will be made in advance in U.S. dollars on a lump-sum or partial-payment basis, depending on the amount of the grant and any peculiar financial requirements.

Unless otherwise provided in the schedule of payments or directed by the contracting officer, if tender of payment in the currency of the country where the work is to be performed is made by the U.S. Government, the grantee agrees that he will accept such currency at the rate of exchange in effect on the date of each payment as determined by the U.S. Accounting and Finance Office.

Grant Period Extension

When an extension in the grant period at no additional cost is desired, a written request by the institution shall be made to the contracting officer immediately. Mutually agreeable time extension will be evidenced by written amendments to the instrument. Extension of time shall not, of itself, entitle the institution to additional funds.

Requests for extension exceeding six months must be accompanied by a revised budget indicating the planned use of unexpended funds during the extension period.

Adherence to Original Research Objectives

Institutions in which research is sponsored by grants are encouraged to discontinue or modify unpromising lines of investigation, or to explore interesting leads which may appear during the development of the research. AFOSR must, however, be consulted prior to any changes that might lead to significant deviations from the objectives or overall program of the original research. The institution will not construe notification as authorization to exceed the grant fund.

Reprogramming of Expenditures

The principal investigator, working within the policies of the performing institution, is considered to be best qualified to determine the most effective use of instrument funds in accomplishing the proposed research. Therefore, the principal investigator and the institution may program the expenditure of funds without strict adherence to the original estimate in each category of direct costs. Prior written approval of the contracting officer must be obtained, however, before any of the following are accomplished with instrument funds:

a. Secondary agreements for performance of any portion of the research intended to be performed by the institution's scientific investigators.

b. Purchase of any general-purpose equipment (office equipment and furnishings, air conditioning, etc.) or automatic data-processing equipment.

c. Purchase of permanent research equipment having an acquisition cost of $5,000 or more (unless the equipment was specifically included in an approved budget).

d. Expenditures for permanent equipment in excess of 25% of the amount allotted for such equipment in the institution's negotiated budget (permanent equipment shall include any item having an acquisition cost of $500 or more on an expected service life of two years or more.

e. Expenditures for construction, alteration or repair of buildings, structures or other real property, including painting and the installation of equipment such as air conditioning.

Expenditure Limitations

Any commitments or expenditures incurred by the performing institution in excess of the funds provided by the instrument shall be the responsibility of the institution. Expenditures incurred prior to the effective date of the instrument may not be charged against AFOSR federally authorized funds. The institution must notify AFOSR promptly whenever the amount of federally authorized funds is expected to exceed the expenditures of the institution by more than $5,000 or 5% of the award, whichever is greater. The institution will not construe notification as authorization to exceed the grant funds.

Transfer of Research Equipment

Title to research equipment acquired at U.S. Government expense by the grantee shall normally vest in tthe grantee. The government retains the right to direct title to such equipment be transferred if the principal investigator moves to another institution and continues the research project there.

Stipulating Patent Rights

Patent rights under each grant will be as specified in "Rights to Inventions Made to Nonprofit Organizations and Small Business Firms" (37 CFR Part 401) unless otherwise specified in the grant. Invention reports must be filed at least annually and at the end of the period of grant or cooperative agreement. Use DD Form 882, Report of Inventions and Subcontracts, to file an invention report. (See Appendix D for instructions on completing the form and a sample form.) Negative reports are required. The grant or cooperative agreement cannot be closed out until all invention reporting requirements are met.

Stipulating Rights to Technical Data and Computer Software

Rights in technical data and computer software under each grant or cooperative agreement will be as specified in DOD FAR Supplement 252.227-7013 Rights in Technical Data and Computer Software, which is incorporated into this brochure by reference.

Acknowledgement of Government Rights and Sponsorship

All manuscripts submitted for publication will include the following statement:

> Research sponsored by the Air Force Office of Scientific Research, Air Force Systems Command, USAF, under Grant Number AFOSR XX-XXXX. The U.S. Government is authorized to reproduce and distribute reprints for Governmental purposes notwithstanding any copyright notation thereon.

The following notation will accompany each submission for publication:

> This manuscript is submitted for publication with the understanding that the U.S. Government is authorized to reproduce and distribute reprints for governmental purposes.

Accounting Procedures

The grantee must maintain records for the grant in accordance with generally accepted accounting practices. Such records must contain sufficient detail to show the total actual cost of the research project including any contribution by the grantee and to permit a determination that grant funds were used for their intended purpose.

Audit Information

The grantee shall, upon request, provide to the U.S. Government, until the expiration of three years after final payment for each separate period of performance under this grant, a certified and audited extract supported by photostatic copies of all documents relating thereto and all directly pertinent accounts of the grantee involving transactions relating to this grant. The U.S. Government may audit grant records at any time.

Taxes

Charges against the grant must not contain any amount for any tax or duty which the U.S. Government and the Government of the country of the grantee have agreed shall not be applicable to expenditures in such country by the United States or from which any supplier to the grantee which is exempt under the laws of the grantee's country.

Labor Relations and Standards

In conducting the research under this grant, the grantee shall conform to the laws of its country pertaining to labor standards including hours, wages, workmen's compensation and working conditions.

TERMINATING AND SUSPENDING PERFORMANCE

The Government may suspend performance under the grant or cooperative agreement, pending corrective action by the grantee or recipient or pending a decision to terminate or modify the instrument.

The Government may terminate the instrument in whole or in part for-

Cause. Termination may occur at any time before the date of completion if the Government determines that the grantee or recipient has failed to comply with the conditions of the agreement. Payments made to grantees or recipients or recoveries made by the Government shall be within the legal rights and liabilities of the parties.

Convenience. When both parties agree that continuing the project would not result in benefits commensurate with expending more funds, they may agree to terminate the grant or cooperative agreement. Termination conditions shall include the effective date of termination. In case of partial termination, the portion to be discontinued must be specified. Grantees or recipients shall cancel as many outstanding obligations as possible and shall not incur new ones after the effective date of termination. AFOSR will fully credit the grantee or recipient for the Federal share of the noncancellable obligations properly incurred before termination.

Availability of Principal Investigator

The grantee will inform the contracting officer when it appears that the principal investigator will not be able to devote substantially the amount of time he intended to spend on the research or will otherwise be unable to fulfill his commitment.

Authorization to Perform

The grantee warrants that he has been duly authorized to operate and do business in the country or countries in which this grant is to be performed; that he has obtained, at no cost to the U.S. Government, all necessary licenses and permits required in connection with this grant; and that he will fully comply with all the laws, decrees, labor standards and regulations of such country or countries during the performance of this grant.

Travel

In the performance of travel necessary to this grant, the grantee shall, to the extent consistent with the successful and economical accomplishment of the purpose for which the travel is being made, use air coach, less than first class, or similar accommodations. U.S. Flag Carriers shall be used to the maximum extent possible.

DOCUMENTING RESEARCH RESULTS WITH SCIENTIFIC REPORTS

An annual technical report (for research lasting more than 1 year) and a final technical report (at the completion of the grant or cooperative agreement) are required.

Prepare scientific reports according to MIL-STD-847B. (MIL-STD-847B may be obtained from AFOSR/PK). Submit scientific reports to EOARD (for areas not serviced by EOARD, the reports will be submitted to AFOSR) with a DD Form 1473, Report Documentation Page. (See back of this brochure, Exhibit E, for instructions on completing the form.)

The Annual Technical Report should concisely and factually discuss the significant accomplishments and research progress. It is internally distributed among Air Force laboratories and other principal investigators working within the research area, and it may be sent to DTIC.

The summary should be about 100-200 words. Abstract the technical progress made during the reporting period. Use the third person singular and the past tense. Do not use jargon, special symbols or notations, subscripts, superscripts, mathematical symbols or foreign letters, etc. It should be suitable for ordinary computer processing.

In the body, comprehensively list the research objectives or include the Statement of Work.

Report the status of the research. State significant accomplishments and progress made toward achieving the research objectives.

Cumulatively and chronologically, list articles about the research that have been published and accepted for publication and are planned for publication in technical journals. Indicate likely journals, authors, and titles.

List the names of participating professionals; that is, professional personnel associated with research being pursued at a university. List any advanced degrees awarded. Include dates, recipients, type of degrees, and thesis titles.

List the interactions (coupling activities); that is, names of papers presented orally at meetings, conferences, seminars, etc., and the functions performed as a consultant or advisor to other laboratories and agencies, especially Air Force and other DOD laboratories. Include information about the subject matter, locations, dates, and names of individuals involved.

List the new discoveries, inventions, patent disclosures, and specific applications stemming from the research effort.

In another statements section, give the program manager any other information which may help him or her assess and evaluate the progress and the accomplishments achieved in the research effort.

The annual report shall be submitted 60 days after the annual research period to EOARD. For areas not serviced by EOARD, the reports will be submitted to AFOSR.

The Final Technical Report is the permanent record of the progress and the significant accomplishments made during the research effort. It should comprehensively, cumulatively, and substantively summarize the research period from the date of inception to the date of completion.

If the research has been continuing for several years, and acceptable technical reports have been prepared each year, this report should not be too costly or too time consuming to prepare. Use a similar format as was used for the annual technical reports.

If the results of the research were not previously and adequately reported, the Final Technical Report must sufficiently and substantively describe the research findings and accomplishments. In such cases, send the program manager two draft copies before the due date and before completing, duplicating and submitting the final version.

This report must be suitable for acquisition and distribution by DTIC. Send the number of copies of this report specified in the grant documents within 60 days after the expiration date of the research to EOARD. For areas not serviced by EOARD, the reports will be submitted to AFOSR.

Other Reports

The Informal Technical Report is a letter that is usually not longer than three pages. It is completed at the request of the program manager. Its primary purpose is to inform the program manager about significant events, accomplishments, and anticipated problems that may affect the conduct of the planned research. It should summarize the progress of the research being performed, new discoveries, inventions or patent disclosures, anticipated changes in the commitments of key personnel and in the planned approach. It should also list the acquisition or construction of major or special research equipment and the titles of manuscripts planned for publication. Send EOARD (excluding those areas not serviced by EOARD) and the program manager one copy each signed by the principal investigator within 15 days after the request.

A Scientific Report may be prepared, reproduced, and distributed as an AFOSR scientific report. For example, an AFOSR scientific report is used for rapidly disseminating highly significant research results or for scientific reports that are too long or that contain useful compilations of data, tables, and computations not normally accepted by technical journals. It is not appropriate for a student's thesis. Before preparing an AFOSR Scientific Report, obtain written permission from the program manager, who will then furnish detailed instructions for formatting it, reproducing it, and distributing it. Send the program manager and EOARD (excluding those areas not serviced by EOARD) one draft copy each for inspection and acceptance. On its cover, an AFOSR Scientific Report will prominently display the following disclaimer: "The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies or endorsements, either expressed or implied, of the Air Force Office of Scientific Research or the US Government."

Fiscal Reports

Fiscal reports will be delivered to EOARD (for areas not serviced by EOARD, the reports will be submitted to AFOSR), will show the expenditure of grant funds, and will show the grantee's contribution from non-U.S. Government funds on a lump sum basis. Each report will cover expenditures from the inception of the grant through the end of the reporting period. All costs must be shown in dollars. Report forms are forwarded with the grant. Additional copies may be obtained from the contracting officer. A sample fiscal report form is shown in the back of this brochure. (Exhibit C)

A final fiscal report in duplicate covering the entire grant period shall be submitted as soon as possible but no more than 90 days after the end of the grant period. Interim fiscal reports shall be submitted 90 days after the end of each grant year when the grant period is greater than one year.

PAYING COSTS WITH COST-SHARING MONIES

When a grantee or recipient offers to cost share in a research project or amended research project, AFOSR grant funds and the grantee's or recipient's cost sharing funds will be expressed in dollars in the grant or cooperative agreement. If at the end of the grant or cooperative agreement, the actual

project cost is less than the project cost as negotiated, the actual cost will be allocated between the Government and the recipient in the dollar ratio originally proposed. Excess Government funds will be returned according to the procedures in the paragraph entitled UNEXPENDED FUNDS AND EARNED INTEREST.

If the contracting officer approves a significant departure from the original research objectives, the grantee or recipient may request that the negotiated cost-sharing percentage be adjusted.

Unexpended Funds and Interest Earned

At the completion of the research, any uncommitted funds and any interest earned by grant funds on deposit, shall be returned to the contracting officer. Refund shall be made by check payable to the Air Force Office of Scientific Research and shall be submitted at the same time as the final fiscal report.

Area Restrictions

Unless the written approval of the contracting officer is first obtained, the grantee shall not acquire for use in performance of this grant any supplies or services originating from sources within Communist areas of North Korea, Vietnam or Cuba.

Photographic Records

If the grantee photographically records the progress or highlighs of the research showing, for example, special equipment used, or special laboratory techniques designed, copies of such photographic records suitable for reproduction should be made available to the grantor.

Use of Human Subjects

No instrument funds may be used for any research involving uninformed or non-voluntary human beings as experimental subjects (Public Law 94-419). Institutions must also ensure compliance with Department of Health and Human Services, Department of Defense, Air Force and Air Force Systems Command regulatory guidelines on human subjects. Consult the program manager for further details on applicable restrictions.

Care of Laboratory Animals

Animals used in AFOSR-sponsored research programs will be acquired from a dealer licensed by the Secretary of Agriculture, or from exempted sources in accordance with P.L. 89-544, Laboratory Animal Welfare Act, 24 August 1966, as amended by P.L. 91-579, Animal Welfare Act of 1970, 24 December 1970.

In caring for live animals used or intended to be used in the performance of grants or cooperative agreements, grantees or recipients shall adhere to the regulations of the United States Department of Agriculture and standards issued under the Public Laws enumerated immediately above. Also follow the principles in the GUIDE FOR THE CARE AND USE OF LABORATORY ANIMALS prepared by the Institute of Laboratory Animals Resources and the National Academy of Sciences-National Research Council. In case of conflict between standards, the regulations and laws prevail.

PROTECTING PROPRIETARY INFORMATION

AFOSR has a continuing interest in receiving and evaluating proposals containing new ideas, suggestions and innovative concepts germane to the potential needs of the Air Force (AF). The substance of any such proposal may already be known to Government employees or Government contractors, may already be in the public domain or may be available now or later from sources other than the submission. Accordingly, we exercise precautions to preclude misunderstanding by the submitter and to prevent such proposals from having any restrictive or limiting effects on the Government's research and development programs.

We recognize that proposals may contain information concerning or relating to trade secrets, processes, operations, style of work or apparatus and may contain information concerning or relating to the identity, confidential statistical data, amount or source of income, profits, losses or expenditures of a person, firm, partnership, corporation or association. Both the Trade Secrets Act, 18 USC 542(a), and the Freedom of Information Act, 5 USC 1905, provide protection for certain types of data. The policy of the Air Force is to treat such information as protected from disclosure only when the Air Force has been properly put on notice of the proprietary nature of such information in a proposal.

Notwithstanding policy, if information contained in a proposal is in the public domain, it cannot be protected under law as a trade secret; for example, a patent application. In such a case, the AF will not accept liability for failure to safeguard against open disclosure.

As part of our scientific and peer review evaluation process, AFOSR will use non-Government consultant personnel to evaluate proposals. They work under contract to AFOSR to evaluate. The evaluators may not use the information in the proposal for any purpose other than to evaluate the proposal and they may not disclose, reproduce or transmit such information to any source outside the Government without prior, written permission of the proposer.

After contract or grant award, we sometimes receive requests for either "the proposal" or "the technical proposal" leading to the award. Frequently, the technical proposals have been incorporated into a contract or grant and thereby become releasable under the Freedom of Information Act (FOIA) as part of the contract or grant document.

By incorporating the statement of work into the contract or grant instead of incorporating the entire technical proposal, a researcher may provide some proprietary ideas in the technical proposal and have some assurance they will not be subsequently released under the Freedom of Information Act.

In any case, neither selective incorporation nor a restrictive legend will, per se, protect data from disclosure under a FOIA request. In cases in which your proposal is specifically requested to be released under FOIA, you will be contacted for your views regarding its releasability. A prompt response to such a request is vital since certain statutory time restrictions must be met. The final decision to release any information rests with AFOSR.

If you wish to restrict the proposal from open disclosure, mark the cover page with the following legend:

> This proposal includes data that shall not be disclosed outside the Government or its contracted evaluators and shall not be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate the proposal. If, however, a contract or grant is awarded to this offeror as a result of, or in connection with, the submission of this data, the Government shall have the right to duplicate, use or disclose the data to the extent provided in the contract or grant.
>
> This restriction does not limit the Government's right to use information contained in the data if it is obtained from another source without restriction. The data subject to this restriction is contained on page(s) _____.

And mark each page that is to be restricted with the following:

> Use or disclosure of proposal data is subject to the restriction on the Cover Page of this proposal.
>
> If data is submitted without appropriate restrictive markings, it may jeopardize the submitter's ability to prevent disclosure outside the Government.

To reduce administrative requirements, you may include the following statements with your proposal and check the appropriate boxes:

The offeror grants AFOSR the authority to release the following portions of its proposal to contract evaluators only for the purpose of evaluation:

Cover Page	Yes___	No___
Abstract	Yes___	No___
Technical Proposal	Yes___	No___
Statement of Work	Yes___	No___
Vita	Yes___	No___
Cost Proposal	Yes___	No___

If this proposal results in a contract or grant, the offeror grants AFOSR the authority to release the following portions of its proposal in response to requests under the Freedom of Information Act, only after such award, without prior contact with the offeror:

Cover Page	Yes___	No___
Abstract	Yes___	No___
Technical Proposal	Yes___	No___
Statement of Work	Yes___	No___
Vita	Yes___	No___
Cost Proposal	Yes___	No___

DISPOSING OF PROPOSALS

Unless otherwise instructed, proposals not funded will be destroyed 18 months after submission. Proposals funded are included in official Government records and will be maintained in accordance with Air Force regulations (AFRs). Unnecessary extra copies of proposals will be destroyed after the evaluation process is completed.

COST ESTIMATE

RESEARCH PERIOD _____ to _____	AFOSR SUPPORT	COST SHARING Amount (SOURCE)	TOTAL PROJECT COST
1. SALARIES & WAGES			
Principal Investigator - Dr. W. T. Doan			
One-fourth time acad. yr. (1/4 x $32,000/9 mo.)			
Full-time summer, 2 mos. (2/9 x $32,000/9 mo.)	$ 7,111	(Internal) $ 8,000	$15,111
Senior Investigator - Dr. M.T. Chambers			
Half-time acad. yr.(1/2 x $24,000/9 mo.)			
Full-time summer, 2 mos. (2/9 x $24,000/9 mo.)	$ 5,333	(Internal) $12,000	$17,333
Research Assistants (2 Graduate Students)			
Half time, 9 months - $225/month			
Full-time summer, 3 months - $450/month	$ 6,750		$ 6,750
Laboratory Technician - Mr. John Hall			
One-fourth time, 12 mos. (1/4 x $16,000/annual salary)	$ 4,000		$ 4,000
Total Salaries and Wages Costs	$23,194	$20,000	$43,194
2. Permanent Equipment			
Standard Equipment			
Signal Generator (ABC Model 606A)	$ 1,350		$ 1,350
H.F.Receiver (ABC Model 880)	$ 1,575		$ 1,575
Oscilloscope (XYZ Model 130C)	$ 695		$ 695
Transistor Curve Tracer (Specific model not yet determined. This is best estimate based on present knowledge.)	$ 1,075		$ 1,075
Special Equipment, none.			
Total Equipment Costs	$ 4,695		$ 4,695
3. Expendable Supplies and Materials			
If such a relationship is feasible, substantiate this area from experience gained over a previous grant or similar project.			
Liquid helium (60 liters @$6/liter)	$ 360		$ 360
Glassware (prior year actual cost $300)	$ 320		$ 320
Misc. (based on historical experience)	$ 120		$ 120
Total Expendable Supplies/Materials Costs	$ 800		$ 800
4. Travel (Indicate destination, number of days per trip, cost per trip and purpose of anticipated travel. Show per diem, mileage, air fare, etc., separately.)			
Two trips to AFOSR in Washington, D.C., @ $150/trip (to discuss and present results of research) ($100 mi., $50/diem)	$ 300		$ 300
Two trips to East Coast @ $175/trip (to attend the American Physical Society Meeting) ($125 mi., $50/diem)	350		350
Total Travel Costs	$ 650		$ 650

Exhibit A

5. Publication and report costs			
Eight pages in Physical Review Journal @ $60/page	$ 480		$ 480
Total Publication Costs	$ 480		$ 480
6. Computer costs (Show name and model number of computer, number of hours, hourly rate and indicate if rate has approval of Defense Contract Audit Agency (DCAA) Auditor.)			
IBM 7094, 20 hrs.@ $210/hr., Auditor OKd	$ 4,200		$ 4,200
Total Computer Costs	$ 4,200		$ 4,200
7. Employee Benefits (Indicate rate and basis for estimate.)			
7.2% of salaries and wages (rate was approved by DCAA auditor)	$ 1,670	$ 1,440 (Internal)	$ 3,110
Total Employee Benefits Costs	$ 1,670	$ 1,440	$ 3,110
8. Other direct costs (Itemize and show basis for anticipated direct costs not included above.)			
Consultant (4 days @ $200 per day)	$ 800		$ 800
Total Other Direct Costs	$ 800		$ 800
TOTAL DIRECT COSTS	$36,489	$21,440	$57,929
9. Indirect costs (Indicate percentage and base.)			
Current provisional rate - 56% of salaries and wages			
AFOSR support 56% of $23,194	$12,989	$11,200	$24,189
TOTAL ESTIMATED COSTS	$49,478	$32,640	$82,118

DD Form 1473: Report Documentation Page

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188
1a. REPORT SECURITY CLASSIFICATION		1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION / AVAILABILITY OF REPORT		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE				
4. PERFORMING ORGANIZATION REPORT NUMBER(S)		5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code)		7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS		
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification)				
12. PERSONAL AUTHOR(S)				
13a. TYPE OF REPORT	13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT	
16. SUPPLEMENTARY NOTATION				
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP / SUB-GROUP			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)				
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION		
22a. NAME OF RESPONSIBLE INDIVIDUAL		22b. TELEPHONE (Include Area Code)	22c. OFFICE SYMBOL	

DD Form 1473, JUN 86 Previous editions are obsolete. SECURITY CLASSIFICATION OF THIS PAGE

DD Form 1473: Instructions for Preparation of Report Documentation Page

INSTRUCTIONS FOR PREPARATION OF REPORT DOCUMENTATION PAGE

GENERAL INFORMATION

The accuracy and completeness of all information provided in the DD Form 1473, especially classification and distribution limitation markings, are the responsibility of the authoring or monitoring DoD activity.

Because the data input on this form will be what others will retrieve from DTIC's bibliographic data base or may determine how the document can be accessed by future users, care should be taken to have the form completed by knowledgeable personnel. For better communication and to facilitate more complete and accurate input from the originators of the form to those processing the data, space has been provided in Block 22 for the name, telephone number, and office symbol of the DoD person responsible for the input cited on the form.

All information on the DD Form 1473 should be typed.

Only information appearing on or in the report, or applying specifically to the report in hand, should be reported. If there is any doubt, the block should be left blank.

Some of the information on the forms (e.g., title, abstract) will be machine indexed. The terminology used should describe the content of the report or identify it as precisely as possible for future identification and retrieval.

NOTE: Unclassified abstracts and titles describing classified documents may appear separately from the documents in an unclassified context, e.g., in DTIC announcement bulletins and bibliographies. This must be considered in the preparation and marking of unclassified abstracts and titles.

The Defense Technical Information Center (DTIC) is ready to offer assistance to anyone who needs and requests it. Call Data Base Input Division, Autovon 284-7044 or Commercial (202) 274-7044.

SECURITY CLASSIFICATION OF THE FORM

In accordance with DoD 5200.1-R, Information Security Program Regulation, Chapter IV Section 2, paragraph 4-200, classification markings are to be stamped, printed, or written at the top and bottom of the form in capital letters that are larger than those used in the text of the document. See also DoD 5220.22-M, Industrial Security Manual for Safeguarding Classified Information, Section II, paragraph 11a(2). This form should be unclassified, if possible.

SPECIFIC BLOCKS

Block 1a. Report Security Classification: Designate the highest security classification of the report. (See DoD 5220.1-R, Chapters I, IV, VII, XI, Appendix A.)

Block 1b. Restricted Marking: Enter the restricted marking or warning notice of the report (e.g., CNWDI, RD, NATO).

Block 2a. Security Classification Authority: Enter the commonly used markings in accordance with DoD 5200.1-R, Chapter IV, Section 4, paragraph 4-400 and 4-402. Indicate classification authority.

Block 2b. Declassification / Downgrading Schedule: Indicate specific date or event for declassification or the notation, "Originating Agency Determination Required" or "OADR." Also insert (when applicable) downgrade to _____ on _____ (e.g., Downgrade to Confidential on 6 July 1983). (See also DoD 5220.22-M, Industrial Security Manual for Safeguarding Classified Information, Appendix II.)

NOTE: Entry must be made in Blocks 2a and 2b except when the originator report is unclassified and has never been classified.

Block 3. Distribution/Availability Statement of Report: Insert the statement as it appears on the report. If a limited distribution statement is used, the reason must be one of those given by DoD Directive 5200.20, Distribution Statements on Technical Documents, as supplemented by the 18 OCT 1983 SECDEF Memo, "Control of Unclassified Technology with Military Application." The Distribution Statement should provide for the broadest distribution possible within limits of security and controlling office limitations.

Block 4. Performing Organization Report Number(s): Enter the unique alphanumeric report number(s) assigned by the organization originating or generating the report from its research and whose name appears in Block 6. These numbers should be in accordance with ANSI STD 239.23-74, "American National Standard Technical Report Number." If the Performing Organization is also the Monitoring Agency, enter the report number in Block 4.

Block 5. Monitoring Organization Report Number(s): Enter the unique alphanumeric report number(s) assigned by the Monitoring Agency. This should be a number assigned by a DoD or other government agency and should be in accordance with ANSI STD 239.23-74. If the Monitoring Agency is the same as the Performing Organization, enter the report number in Block 4 and leave Block 5 blank.

Block 6a. Name of Performing Organization: For in-house reports, enter the name of the performing activity. For reports prepared under contract or grant, enter the contractor or the grantee who generated the report and identify the appropriate corporate division, school, laboratory, etc., of the author.

Block 6b. Office Symbol: Enter the office symbol of the Performing Organization.

Block 6c. Address: Enter the address of the Performing Organization. List city, state, and ZIP code.

Block 7a. Name of Monitoring Organization: This is the agency responsible for administering or monitoring a project, contract, or grant. If the monitor is also the Performing Organization, leave Block 7a blank. In the case of joint sponsorship, the Monitoring Organization is determined by advance agreement. It can be either an office, a group, or a committee representing more than one activity, service, or agency.

Block 7b. Address: Enter the address of the Monitoring Organization. Include city, state, and ZIP code.

Block 8a. Name of Funding/Sponsoring Organization: Enter the full official name of the organization under whose immediate funding the document was generated, whether the work was done in-house or by contract. If the Monitoring Organization is the same as the Funding Organization, leave 8a blank.

Block 8b. Office Symbol: Enter the office symbol of the Funding/Sponsoring Organization.

Block 8c. Address: Enter the address of the Funding/Sponsoring Organization. Include city, state and ZIP code.

DD Form 1473 Instructions, JUN 86

DD Form 1473: Instructions for Preparation of Report Documentation Page—Continued

Block 9. Procurement Instrument Identification Number: For a contractor grantee report, enter the complete contract or grant number(s) under which the work was accomplished. Leave this block blank for in-house reports.

Block 10. Source of Funding (Program Element, Project, Task Area, and Work Unit Number(s)): These four data elements relate to the DoD budget structure and provide program and/or administrative identification of the source of support for the work being carried on. Enter the program element, project, task area, work unit accession number, or their equivalents which identify the principal source of funding for the work required. These codes may be obtained from the applicable DoD forms such as the DD Form 1498 (Research and Technology Work Unit Summary) or from the fund citation of the funding instrument. If this information is not available to the authoring activity, these blocks should be filled in by the responsible DoD Official designated in Block 22. If the report is funded from multiple sources, identify only the Program Element and the Project, Task Area, and Work Unit Numbers of the principal contributor.

Block 11. Title: Enter the title in Block 11 in initial capital letters exactly as it appears on the report. Titles on all classified reports, whether classified or unclassified, must be immediately followed by the security classification of the title enclosed in parentheses. A report with a classified title should be provided with an unclassified version if it is possible to do so without changing the meaning or obscuring the contents of the report. Use specific, meaningful words that describe the content of the report so that when the title is machine-indexed, the words will contribute useful retrieval terms.

If the report is in a foreign language and the title is given in both English and a foreign language, list the foreign language title first, followed by the English title enclosed in parentheses. If part of the text is in English, list the English title first followed by the foreign language title enclosed in parentheses. If the title is given in more than one foreign language, use a title that reflects the language of the text. If both the text and titles are in a foreign language, the title should be translated, if possible, unless the title is also the name of a foreign periodical. Transliterations of often used foreign alphabets (see Appendix A of MIL-STD-8478) are available from DTIC in document AD-A080 800.

Block 12. Personal Author(s): Give the complete name(s) of the author(s) in this order: last name, first name, and middle name. In addition, list the affiliation of the authors if it differs from that of the performing organization.

List all authors. If the document is a compilation of papers, it may be more useful to list the authors with the titles of their papers as a contents note in the abstract in Block 19. If appropriate, the names of editors and compilers may be entered in this block.

Block 13a. Type of Report: Indicate whether the report is summary, final, annual, progress, interim, etc.

Block 13b. Time Covered: Enter the inclusive dates (year, month, day) of the period covered, such as the life of a contract in a final contractor report.

Block 14. Date of Report: Enter the year, month, and day, or the year and the month the report was issued as shown on the cover.

Block 15. Page Count: Enter the total number of pages in the report that contain information, including cover, preface, table of contents, distribution lists, partial pages, etc. A chart in the body of the report is counted even if it is unnumbered.

Block 16. Supplementary Notation: Enter useful information about the report in hand, such as: "Prepared in cooperation with...." "Translation of (or by) ..." "Symposium...." If there are report numbers for the report which are not noted elsewhere on the form (such as internal series numbers or participating organization report numbers) enter in this block.

Block 17. COSATI Codes: This block provides the subject coverage of the report for announcement and distribution purposes. The categories are to be taken from the "COSATI Subject Category List" (DoD Modified), Oct 65, AD-624 000. A copy is available on request to any organization generating reports for DoD. At least one entry is required as follows:

Field - to indicate subject coverage of report.

Group - to indicate greater subject specificity of information in the report.

Sub-Group - if specificity greater than that shown by Group is required, use further designation as the numbers after the period (.) in the Group breakdown. Use only the designation provided by AD-624 000.

Example: The subject "Solid Rocket Motors" is Field 21, Group 08, Subgroup 2 (page 32, AD-624 000).

Block 18. Subject Terms: These may be descriptors, keywords, posting terms, identifiers, open-ended terms, subject headings, acronyms, code words, or any words or phrases that identify the principal subjects covered in the report, and that conform to standard terminology and are exact enough to be used as subject index entries. Certain acronyms or "buzz words" may be used if they are recognized by specialists in the field and have a potential for becoming accepted terms. "Laser" and "Reverse Osmosis" were once such terms.

If possible, this set of terms should be selected so that the terms individually and as a group will remain UNCLASSIFIED without losing meaning. However, priority must be given to specifying proper subject terms rather than making the set of terms appear "UNCLASSIFIED." Each term on classified reports must be immediately followed by its security classification, enclosed in parentheses.

For reference on standard terminology the "DTIC Retrieval and Indexing Terminology" DRIT-1979, AD-A068 500, and the DoD "Thesaurus of Engineering and Scientific Terms (TEST) 1969, AD-672 000, may be useful.

Block 19. Abstract: The abstract should be a pithy, brief (preferably not to exceed 300 words), factual summary of the most significant information contained in the report. However, since the abstract may be machine-searched, all specific and meaningful words and phrases which express the subject content of the report should be included, even if the word limit is exceeded.

If possible, the abstract of a classified report should be unclassified and consist of publicly releasable information (Unlimited), but in no instance should the report content description be sacrificed for the security classification.

NOTE: An unclassified abstract describing a classified document may appear separately from the document in an unclassified context e.g., in DTIC announcements or in commercial products. This must be considered in the preparation and marking of unclassified abstracts.

For further information on preparing abstracts, employing scientific symbols, verbalizing, etc., see paragraphs 2.1(n) and 2.3(b) in MIL-STD-8478.

Block 20. Distribution / Availability of Abstract: This block must be completed for all reports. Check the applicable statement: "unclassified / unlimited," "same as report," or, if the report is available to DTIC registered users "DTIC users."

Block 21. Abstract Security Classification: To ensure proper safeguarding of information, this block must be completed for all reports to designate the classification level of the entire abstract. For CLASSIFIED abstracts, each paragraph must be preceded by its security classification code in parentheses.

Block 22a,b,c. Name, Telephone and Office Symbol of Responsible Individual: Give name, telephone number, and office symbol of DoD person responsible for the accuracy of the completion of this form.

DD Form 1473 Instructions Reverse, JUN 86

FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED	2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER	OMB Approved No. 80-R0180	PAGE OF PAGES
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)	4. EMPLOYER IDENTIFICATION NUMBER / 5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER	6. FINAL REPORT ☐ YES ☐ NO	7. BASIS ☐ CASH ☐ ACCRUAL
	8. PROJECT/GRANT PERIOD (See instructions) FROM (Month, day, year) / TO (Month, day, year)	9. PERIOD COVERED BY THIS REPORT FROM (Month, day, year) / TO (Month, day, year)	

10. PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	STATUS OF FUNDS (b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	$	$	$	$	$	$	$
b. Total outlays this report period							
c. Less: Program income credits							
d. Net outlays this report period (Line b minus line c)							
e. Net outlays to date (Line a plus line d)							
f. Less: Non-Federal share of outlays							
g. Total Federal share of outlays (Line e minus line f)							
h. Total unliquidated obligations							
i. Less: Non-Federal share of unliquidated obligations shown on line h							
j. Federal share of unliquidated obligations							
k. Total Federal share of outlays and unliquidated obligations							
l. Total cumulative amount of Federal funds authorized							
m. Unobligated balance of Federal funds							

11. INDIRECT EXPENSE	a. TYPE OF RATE (Place "X" in appropriate box) ☐ PROVISIONAL ☐ PREDETERMINED ☐ FINAL ☐ FIXED			
	b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE

12. REMARKS. Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.

13. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
TYPED OR PRINTED NAME AND TITLE	TELEPHONE (Area code, number and extension)

9-101

STANDARD FORM 269 (7-76)
Prescribed by Office of Management and Budget
Cir. No. A-102

Exhibit C

25

INSTRUCTIONS

Please type or print legibly. Items 1, 2; 3, 6, 7, 9, 10d, 10e, 10g, 10i, 10l, 11a, and 12 are self-explanatory, specific instructions for other items are as follows:

Item	Entry
4	Enter the employer identification number assigned by the U.S. Internal Revenue Service or FICE (institution) code, if required by the Federal sponsoring agency.
5	This space is reserved for an account number or other identifying numbers that may be assigned by the recipient.
8	Enter the month, day, and year of the beginning and ending of this project period. For formula grants that are not awarded on a project basis, show the grant period.
10	The purpose of vertical columns (a) through (f) is to provide financial data for each program, function, and activity in the budget as approved by the Federal sponsoring agency. If additional columns are needed, use as many additional forms as needed and indicate page number in space provided in upper right; however, the totals of all programs, functions or activities should be shown in column (g) of the first page. For agreements pertaining to several Catalog of Federal Domestic Assistance programs that do not require a further functional or activity classification breakdown, enter under columns (a) through (f) the title of the program. For grants or other assistance agreements containing multiple programs where one or more programs require a further breakdown by function or activity, use a separate form for each program showing the applicable functions or activities in the separate columns. For grants or other assistance agreements containing several functions or activities which are funded from several programs, prepare a separate form for each activity or function when requested by the Federal sponsoring agency.
10a	Enter the net outlay. This amount should be the same as the amount reported in Line 10e of the last report. If there has been an adjustment to the amount shown previously, please attach explanation. Show zero if this is the initial report.
10b	Enter the total gross program outlays (less rebates, refunds, and other discounts) for this report period, including disbursements of cash realized as program income. For reports that are prepared on a cash basis, outlays are the sum of actual cash disbursements for goods and services, the amount of indirect expense charged, the value of in-kind contributions applied, and the amount of cash advances and payments made to contractors and subgrantees. For reports prepared on an accrued expenditure basis, outlays are the sum of actual cash disbursements, the amount of indirect expense incurred, the value of in-kind contributions applied, and the net increase (or decrease) in the amounts owed by the recipient for goods and other property received and for services performed by employees, contractors, subgrantees, and other payees.
10c	Enter the amount of all program income realized in this period that is required by the terms and conditions of the Federal award to be deducted from total project costs. For reports prepared on a cash basis, enter the amount of cash income received during the reporting period. For reports prepared on an accrual basis, enter the amount of income earned since the beginning of the reporting period. When the terms or conditions allow program income to be added to the total award, explain in remarks, the source, amount and disposition of the income.
10f	Enter amount pertaining to the non-Federal share of program outlays included in the amount on line e.
10h	Enter total amount of unliquidated obligations for this project or program, including unliquidated obligations to subgrantees and contractors. Unliquidated obligations are: Cash basis—obligations incurred but not paid; Accrued expenditure basis—obligations incurred but for which an outlay has not been recorded. Do not include any amounts that have been included on lines a through g. On the final report, line h should have a zero balance.
10j	Enter the Federal share of unliquidated obligations shown on line h. The amount shown on this line should be the difference between the amounts on lines h and i.
10k	Enter the sum of the amounts shown on lines g and j. If the report is final the report should not contain any unliquidated obligations.
10m	Enter the unobligated balance of Federal funds. This amount should be the difference between lines k and l.
11b	Enter rate in effect during the reporting period.
11c	Enter amount of the base to which the rate was applied.
11d	Enter total amount of indirect cost charged during the report period.
11e	Enter amount of the Federal share charged during the report period. If more than one rate was applied during the project period, include a separate schedule showing bases against which the indirect cost rates were applied, the respective indirect rates the month, day, and year the indirect rates were in effect, amounts of indirect expense charged to the project, and the Federal share of indirect expense charged to the project to date

☆U.S. Government Printing Office 1985—461-275/20171

REPORT OF INVENTIONS AND SUBCONTRACTS

(Pursuant to "Patent Rights" Contract Clause) (See Instructions on Reverse Side)

1a. NAME OF CONTRACTOR/ SUBCONTRACTOR	c. CONTRACT NUMBER	2a. NAME OF GOVERNMENT PRIME CONTRACTOR	e. CONTRACT NUMBER	3. CHECK ONE (X) ONE
b. ADDRESS *(include Zip Code)*	d. AWARD DATE (YYMMDD)	b. ADDRESS *(include Zip Code)*	d. AWARD DATE (YYMMDD)	4. REPORTING PERIOD (YYMMDD) FROM TO

SECTION I - SUBJECT INVENTIONS

5. "SUBJECT INVENTIONS" REQUIRED TO BE REPORTED BY CONTRACTOR/SUBCONTRACTOR *(If "None", so state)*

a. NAME OF INVENTOR(S) *(Last, First, M.I.)*	b. TITLE OF INVENTION(S)	c. DISCLOSURE NO., PATENT APPLICATION SERIAL NO. OR PATENT NO.	d. ELECTION TO FILE PATENT APPLICATIONS				e. CONFIRMATORY INSTRUMENT OR ASSIGNMENT FORWARDED TO CONTRACTING OFFICER	
			UNITED STATES		FOREIGN			
			YES	NO	YES	NO	YES	NO

f. EMPLOYER OF INVENTOR(S) NOT EMPLOYED BY CONTRACTOR/SUBCONTRACTOR		g. ELECTED FOREIGN COUNTRIES IN WHICH A PATENT APPLICATION WILL BE FILED	
i. NAME OF INVENTOR *(Last, First, M.I.)*	i. NAME OF INVENTOR *(Last, First, M.I.)*	h. TITLE OF INVENTION	i. FOREIGN COUNTRIES OF PATENT APPLICATION
ii. NAME OF EMPLOYER	ii. NAME OF EMPLOYER		
iii. ADDRESS OF EMPLOYER *(include Zip Code)*	iii. ADDRESS OF EMPLOYER *(include Zip Code)*		

SECTION II - SUBCONTRACTS *(Containing a "Patent Rights" clause)*

6. SUBCONTRACTS AWARDED BY CONTRACTOR/SUBCONTRACTOR *(If "None", so state)*

a. NAME OF SUBCONTRACTOR(S)	b. ADDRESS *(include Zip Code)*	c. SUBCONTRACT NO.(S)	d. DAR "PATENT RIGHTS"		e. DESCRIPTION OF WORK TO BE PERFORMED UNDER SUBCONTRACT(S)	f. SUBCONTRACT DATES (YYMMDD)	
			CLAUSE NO.	DATE (YYMM)		AWARD	ESTIMATED COMPLETION

SECTION III - CERTIFICATION

7. CERTIFICATION OF REPORT BY CONTRACTOR/SUBCONTRACTOR *(Not required if ☐Small Business or ☐Non Profit organization) (Check appropriate box)*

a. NAME OF AUTHORIZED CONTRACTOR/SUBCONTRACTOR OFFICIAL *(Last, First, M.I.)*	c. I certify that the reporting party has procedures for prompt identification and timely disclosure of "Subject Inventions," that such procedures have been followed and that all "Subject Inventions" have been reported.
b. TITLE	SIGNATURE OF AUTHORIZED CONTRACTOR/SUBCONTRACTOR OFFICIAL — DATE (YYMMDD)

DD FORM 82 OCT 882

EDITION OF 1 OCT 75 IS OBSOLETE

Exhibit D